

ABSTRACT OF THE DISCLOSURE

A microplate cover assembly which is compatible with manual workstations or robotic handling systems used for high throughput screening. The cover assembly includes a cover, a pressure plate and a layer of sealing material. The cover is shaped such
5 that when it is engaged with a microplate, the cover exerts a compressive force on the pressure plate, which in turn disperses the force in a substantially uniform manner across the layer of sealing material. The cover and pressure plate also include laterally-extending tabs which allow it to be engaged with or disengaged from a microplate in a fully automated fashion.